

10/026,199

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, listings, of claims in the application:

Listing of Claims:

Claims 1-18 (cancelled)

19. (Currently Amended): An electrical transformer comprising:

a coil comprising:

a plurality of layers successively disposed around a central axis, one or more of said layers being conductive and one or more of said layers being insulating;

a plurality of cooling ducts disposed between the layers, each of said cooling ducts being disposed between, and adjacent to, a pair of successive layers and having an interior passage and being comprised of a first resin; and

a second resin encapsulating the layers, said second resin being different than the first resin.

20. (Previously Presented): The electrical transformer of claim 19, wherein the coil has an open core.

21. (Currently Amended): The electrical transformer of claim 20, wherein the coil is cylindrical, and wherein the cooling ducts are radially spaced apart.

22. (Previously Presented): The electrical transformer of claim 19, wherein in each of the cooling ducts, fiberglass filaments reinforce the first resin.

23. (Previously Presented): The electrical transformer of claim 22, wherein the

10/026,199

second resin is an epoxy resin.

24. (Previously Presented): The electrical transformer of claim 23, wherein each of the cooling ducts is formed by pultrusion.

25. (Previously Presented): The electrical transformer of claim 24, wherein the first resin is a polyester resin.

26. (Currently Amended): The electrical transformer of claim 19, wherein the layers comprise a plurality of conductive layers and a plurality of insulating layers arranged in an alternating manner, and wherein the conductive layers are formed from a length of conductive sheet material and the insulating layers are formed from a length of insulating sheet material.

27. (Currently Amended): An electrical transformer comprising:
a coil formed by a method comprising:

- providing a plurality of rigid pre-formed cooling ducts, each of said pre-formed cooling ducts having an enclosed periphery with open ends and an interior passage and being comprised of a first resin reinforced with fiberglass;

- providing a length of conductive sheet material and a length of insulating sheet material;

- winding the lengths of conductive sheet material and insulating sheet material around a central axis to form a plurality of layers comprising insulating and conductive layers;

- during the winding, positioning the pre-formed cooling ducts so as to be disposed between the layers; and

- encapsulating the layers in a second resin, said second resin being different than the first resin.

10/026,199

28. (Previously Presented): The electrical transformer of claim 27, wherein each of the cooling ducts has a length that is shorter than an overall length of the coil.

29. (Previously Presented): The electrical transformer of claim 27, wherein each of the cooling ducts has an elliptical cross-section.

30. (Canceled).

31. (Currently Amended) The electrical transformer of claim ~~30~~ 27, wherein the second resin is an epoxy resin.

32. (Previously Presented): The electrical transformer of claim 31, wherein the first resin is not an epoxy resin.

33. (Previously Presented): The electrical transformer of claim 32, wherein each of the cooling ducts is formed by pultrusion.

34. (Previously Presented): The electrical transformer of claim 33, wherein the first resin is a polyester resin.

35. (Currently Amended): A coil for an electrical transformer, said coil comprising:

a plurality of layers successively disposed around a central axis, one or more of said layers being conductive and one or more of said layers being insulating;

a plurality of cooling ducts disposed between the layers, each of said cooling ducts being disposed between, and adjacent to, a pair of successive layers and having an interior passage and being comprised of a first resin; and,

10/026,199

a second resin encapsulating the layers, said second resin being different than the first resin.

36. (Previously Presented): The coil of claim 35, wherein the second resin is an epoxy resin.

37. (Previously Presented): The coil of claim 36, wherein the first resin is not an epoxy resin and is reinforced with fiberglass.

38. (Previously Presented): The coil of claim 37, wherein each of the cooling ducts is formed by pultrusion.

39. (Previously Presented): The coil of claim 38, wherein the first resin is a polyester resin.

40. (Previously Presented): The coil of claim 36, wherein the layers comprise a plurality of conductive layers and a plurality of insulating layers, and wherein the conductive layers are formed from a length of conductive sheet material and the insulating layers are formed from a length of insulating sheet material.